Do not enter as

CLAIMS

What I claim as my invention is:

1. A collision avoidance system, comprising:

a) at least one trigger sensor associated with a roadway, each said trigger sensor capable of sensing at least one parameter associated with one or more vehicles;

b) at least one vehicle restrictor associated with said roadway, each said restrictor comprising an elongate member disposed generally transverse to said roadway, each said restrictor capable of being actuated to raise or lower relative to said roadway surface to impede passage thereover of said vehicles; and

c) a controller programmed to determine the likelihood of a collision involving any of said vehicles based on said vehicle parameters received from said trigger sensors, programmed to determine which of a selected one or more of said vehicles should be slowed or stopped to avoid said collision based on said vehicle parameters and based on local traffic laws, and programmed to determine at least one selected vehicle restrictor that is being approached by said selected vehicle, wherein said at least one selected vehicle restrictor is actuated by communication from said controller to impede the passage of said selected vehicle to avoid said collision.

2. The collision avoidance system of claim 1, wherein said at least one vehicle parameter is selected from the group comprised of vehicle presence, position, direction, or speed.

3. The collision avoidance system of claim 1, wherein said at least one trigger sensor is selected from the group of technologies capable of detecting vehicle parameters including radar devices, lasers, optical devices, ultrasonic devices,

induction loop devices, wireless transmitters and receivers, pressure-responsive switches, and combinations th reof.

4. The collision avoidance system of claim 1, wherein said at least one trigger sensor comprises an environmental sensor to indicate roadway moisture or sight visibility.

5. The collision avoidance system of claim 4, wherein said controller is programmed to determine said likelihood of said collision further based on said roadway surface friction loss due to moisture or sight visibility loss due to moisture as communicated to said controller from said environmental sensor.

6. The collision avoidance system of claim 1, wherein said at least one trigger sensor is mounted on a generally vertical post adjacent said roadway or on a generally horizontal arm supported above said roadway.

7. The collision avoidance system of claim 1, further comprising a control that receives said vehicle parameter comprising the speed of said selected vehicle and that determines an amount of raising or lowering of the selected vehicle restrictor which amount is selected to be sufficient to slow or stop the vehicle to avoid said collision.

8. The collision avoidance system of claim 1, further comprising a monitoring device associated with said roadway and in real time communication with emergency law enforcement, medical, fire department or other predetermined personnel.

9. The collision avoidance system of claim 8, wherein said at least one monitoring device comprises a camera.

10. The collision avoidance system of claim 1, further comprising an emergency vehicl pass-through control that deactivates the actuation of th v hicl restrictors in

response to a communication from an emergency law nforcement, medical, or fire department vehicle.

11. The collision avoidance system of claim 1, further comprising:

a) at least one pedestrian trigger sensor associated with said roadway, each said pedestrian trigger sensor capable of sensing at least one parameter of one or more pedestrians;

b) at least one alarm associated with said roadway to alert operators of said vehicles of an approaching pedestrian to avoid collision; and

c) said controller programmed to determine the likelihood of a collision between said pedestrian and any of said vehicles, and to select and activate said alarm and to select and activate said selected vehicle restrictor immediately in the path of said selected vehicle.

12. The collision avoidance system of claim 11, wherein said pedestrian parameters comprise the presence, position, speed, or direction of the sensed pedestrian.

13. The collision avoidance system of claim 11, wherein at least one alarm associated with said roadway alerts said pedestrians of an approaching vehicle to avoid collision.

14. The collision avoidance system of claim 1, further comprising:

a) at least one train trigger sensor associated with said roadway, each said train trigger sensor capable of sensing at least one parameter of one or more trains;

b) at least on alarm associated with said roadway to alert operators of said

vehicles of an approaching train to avoid collision; and

c) said controller programmed to determin the likelihood of a collision between said train and any of said vehicles, and to select and activate said alarm and to select and activate said selected vehicle restrictor immediately in the path of said selected vehicle.

15. The collision avoidance system of claim 14, wherein said train parameters comprise the presence, position, speed, or direction of the sensed train.

16. A method for collision avoidance, comprising:

a) sensing parameters of at least one vehicle;

b) determining the likelihood of a collision involving any of said vehicles based on said vehicle parameters;

c) determining which of a selected one or more of said vehicles should be slowed or stopped to avoid said collision based on said vehicle parameters and local traffic laws;

d) determining at least one selected vehicle restrictor in a roadway, that is being approached by said selected vehicle based on said vehicle parameters and said vehicle restrictor locations; and

e) actuating said selected vehicle restrictor to control the parameters of said selected vehicle to avoid said collision.

17. The collision avoidance method of claim 16, wherein said vehicle parameters compris the presence, position, speed, or direction of th s ns d vehicle.

18. The collision avoidance method of claim 16, further comprising:

a) s nsing parameters of at least one pedestrian;

b) determining the likelihood of a collision between said pedestrian and any of said vehicles; and

c) actuating at least one alarm to alert an operator of said vehicle of said approaching vehicle to avoid such a collision.

19. The collision avoidance method of claim 18, wherein said pedestrian parameters comprise the presence, position, speed, or direction of the sensed pedestrian.

20. The collision avoidance method of claim 16, further comprising:

a) sensing parameters of at least one train;

b) determining the likelihood of a collision between said train and any of said vehicles;

c) actuating vehicle restrictors in a roadway to control the parameters of said vehicle to be slowed or stopped to avoid said collision; and

d) actuating at least one alarm to alert an operator of said vehicle of said approaching train to avoid such a collision.

21. The collision avoidance method of claim 20, wherein said train parameters comprise the presence, position, speed, or direction of the sensed train.

22. The collision avoidance system of claim 1, further comprising a control means to adjust operational parameters, whereby system responses are changed.

Sub 25

23. A collision avoidance system, comprising:

a) a traffic control means associated with a roadway and used to coordinate the movement of vehicles, or pedestrians or trains, whereby the status of said traffic control means represents the traffic laws and safety intent of the traffic environment;

b) at least one vehicle restrictor associated with said roadway, each said restrictor comprising an elongate member disposed generally transverse to said roadway, each said restrictor capable of being actuated to raise or lower relative to said roadway surface to impede passage thereover of vehicles; and

c) a controller responsive to the status of said traffic control means, wherein said at least one selected vehicle restrictor is actuated by communication from said controller to impede the passage of said vehicles.